



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,527	10/01/2003	J. Todd Wagner	5115-09-1-1	8319

7590 11/20/2006
McCormick, Paulding & Huber LLP
CityPlace II
185 Asylum Street
Hartford, CT 06103-3402

EXAMINER

BROWN, DREW J

ART UNIT	PAPER NUMBER
----------	--------------

3616

DATE MAILED: 11/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/676,527	Applicant(s) WAGNER ET AL.	
	Examiner Drew J. Brown	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/26/06 (amendment).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the amendment filed on 10/26/06. Claims 1-3 have been amended.

Claim Objections

1. Claim 3 is objected to because of the following informalities: In line 10, "suspension defines" should be changed to --suspension plane defines--. In line 11, "suspension plan defines" should be changed to --suspension plane defines--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee (U.S. Pat. No. 6,182,979).

With respect to claim 1, Lee discloses a suspension for a vehicle having a body having a roll center (RC2). A first suspension assembly extends between a first wheel assembly and the body (Figure 2), wherein the first suspension assembly defines an instant center (C2, Figure 4). A second suspension assembly inherently extends between a second wheel assembly and the body, wherein the second suspension assembly defines an instant center. The first wheel assembly and the second wheel assembly are inherently aligned so that a vertical centerline of each wheel assembly lies within a vertical plane that extends therebetween, and the instant center (C2) of each wheel assembly suspension is located within the vertical plane, below the roll center (RC2) located within the vertical plane (Figure 4), wherein position of the roll center is maintained above the instant center during motion of the vehicle.

Art Unit: 3616

With respect to claim 2, a first control arm (38) extends between a wheel assembly and the body, wherein the first control arm is connected to the body at a first pivot point (34) and further defines a first suspension plane (Figure 4). A second control arm (40) extends between the wheel assembly and the body, wherein the second control arm is connected to the body at a second pivot point (36) and further defines a second suspension plane (Figure 4), and wherein a distance between the first pivot point and the second pivot point is constant (Figure 2). An intersection between the vertical plane and the first suspension defines a first line, and an intersection between the vertical plane and the second suspension plane defines a second line, where the first and second lines intersect at an instant center (C2) which lies below a roll center (RC2) of the vehicle. The first control arm and the second control arm do not cross one another when the first wheel assembly is viewed from one of a front and rear of the vehicle (Figure 2).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner (U.S. Pat. No. 6,173,978 B1).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in

Art Unit: 3616

the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Wagner discloses a suspension system comprising first (24) and second (26) suspension arms, each having two degrees of restriction (32 and 34) and rotatably fixed (column 6, lines 2-6) between a wheel assembly (14) and the body (12), wherein the suspension arms define a first and second suspension plane, respectively. A vertical plane extends through a vertical centerline of the wheel assembly, where an intersection between the vertical plane and the first suspension plane defines a first line, and an intersection between the vertical plane and the second suspension plane defines a second line. The first line and second line intersect at a crossing axis (C) that lies below a roll center of the vehicle. Also, the first suspension arm and the second suspension arm cross in superposition.

Although Wagner does not specifically disclose that the crossing axis (C) is an instant center, it is obvious to one having ordinary skill in the art that it is the instant because it is old and well known in the art how to calculate the instant center based on the positioning of the linkages. The Examiner also notes that when using the same method of calculating the instant center as the present invention, the crossing axis (C) of Wagner is also the instant center.

Response to Arguments

6. Applicant's arguments with respect to claim 3 have been considered but are moot in view of the new ground(s) of rejection.
7. Applicant's arguments filed on 10/26/06 have been fully considered but they are not persuasive.

On page 4 Applicant argues that Lee fails to disclose maintaining the roll center of the vehicle above the instant center during motion of the vehicle. However, once the roll center is adjusted to be positioned above the instant center, the vehicle continues motion while the roll center is maintained above the instant center for an unspecified time until the vehicle conditions change and the roll center is varied accordingly. Therefore, the roll center is maintained above the instant center during motion of the vehicle.

Art Unit: 3616

On page 5 Applicant argues that Lee fails to disclose that a distance between the first pivot point and the second pivot point is constant. However, the Examiner notes that the distance changes between the ends (42 and 46) as shown in Figures 1 and 2, but that the distance between the first pivot point (34) and the second pivot point (36) is constant.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Drew J. Brown whose telephone number is 571-272-1362. The examiner can normally be reached on Monday-Thursday from 8 a.m. to 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/676,527

Page 6

Art Unit: 3616

Drew J. Brown

Examiner

Art Unit 3616

db

11/15/06



DAVID R. DUNN
PRIMARY EXAMINER